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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/931,505	08/16/2001	Steven I. Ross	1280.2002-001	3682
21005	7590	09/02/2005	EXAMINER	
HAMILTON, BROOK, SMITH & REYNOLDS, P.C. 530 VIRGINIA ROAD P.O. BOX 9133 CONCORD, MA 01742-9133			WOZNIAK, JAMES S	
			ART UNIT	PAPER NUMBER
			2655	

DATE MAILED: 09/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/931,505	ROSS ET AL.	
	Examiner	Art Unit	
	James S. Wozniak	2655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. In response to the office action from 3/15/2005, the applicant has submitted an amendment, filed 6/14/2005, amending claims 1, 8, 15, and 22, while arguing to traverse the art rejection based on the limitation regarding evaluating a plurality of contexts for speech enabled applications and prioritizing these contexts based upon an access characteristic (*Amendment, Pages 8-9*). Applicant's arguments have been fully considered, however the previous rejection is maintained, altered only with respect to include claim amendments and due to the reasons listed below in the response to arguments.

Response to Arguments

2. Applicant's arguments have been fully considered but they are not persuasive for the following reasons:

With respect to **Claims 1, 8, 15, and 22**, the applicant argues that Balakrishnan (U.S. Patent: 6,233,559) in view of Grant et al (U.S. Patent: 6,208,972) fails to teach the evaluation of contexts for speech enabled applications and prioritizing these contexts based upon an access characteristic (*Amendment, Page 8*), however the examiner notes that such a feature is disclosed by Balakrishnan. Balakrishnan teaches a speech application context that is based upon an application access characteristic and gives higher priority to an in-focus or active access

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characteristic than an out-of-focus or inactive access characteristic (*application focus, Col. 4, Lines 38-67; and active and inactive applications, Col. 2, Lines 54-66*).

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (*i.e., applying context dependent arbitration to two or more out-of-focus applications, Amendment, Pages 8-9*) are not recited in the independent claims.

With respect to **Claims 3, 10, and 17**, the applicant argues that Balakrishnan in view of Grant fails to teach maintaining multiple distinct grammars for each application, however the examiner notes that such a feature is not claimed. The claim limitation requires that a context is identified by a persistent, foreground, *OR* a background grammar. As noted in the prior office action (Page 4), Balakrishnan teaches command type discrimination for determining an intended speech enabled application.

The remaining dependent claims further limit rejected independent claims, and thus, also remain rejected.

Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The examiner suggests an amendment to claims 1, 8, 15, and 22 regarding evaluating a context *based upon distinct grammars maintained for each speech enabled application comprising persistent, foreground, and background grammars and evaluating and prioritizing a context based on a recency of relevant access characteristic* instead of the presently claimed

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“access characteristic.” The examiner notes that adding such an amendment to the aforementioned claims would overcome the prior art of record.

Claim Objections

3. **Claims 4, 11, and 18** are objected to because they contain the limitation regarding prioritizing contexts based on an access characteristic, which is already claimed in the independent claims, as amended by the applicant. It is suggested that the applicant cancel these claims.

4. **Claims 1-23** are rejected under 35 U.S.C. 103(a) as being unpatentable over Balakrishnan (*U.S. Patent: 6,233,559*) in view of Grant et al (*U.S. Patent: 6,208,972*).

With respect to **Claims 1, 8, and 15**, Balakrishnan discloses:

A method, device, and computer useable medium (*Col. 5, Lines 41-55*) for determining a speech-enabled application to receive a spoken utterance in a multi-context speech enabled environment comprising the steps of:

Evaluating a plurality of contexts for speech-enabled applications and prioritizing the contexts based upon an access characteristic, said evaluating being applied to speech enabled applications whether the application is running or not (*context-dependent arbitrator that gives higher speech command priority to an in-focus application, except for commands such as “start” or “open,” which would be directed to an out-of-focus application, wherein an out-of-focus application also includes an application that is not running, Col. 4, Lines 38-67*);

Receiving a representation of a spoken utterance, the spoken utterance including a command that is able to be associated with multiple applications (*digitizing a speech input from a microphone and extracting features, Col. 4, Lines 18-21, and "start" and "open" commands, Col. 4, Lines 38-67*); and

Directing the representation of the spoken utterance to a selected speech enabled application based upon results of the step of evaluating the contexts (*directing a speech command to a particular application based upon a confidence level relating to context, Col. 4, Lines 52-58*).

Balakrishnan does not specifically suggest that a speech command applied to a selected speech enabled application includes launching the selected speech enabled application as needed and performing a function of the command, however Grant recites such a method (*Col. 8, Lines 45-51, Col. 9, Lines 18-46, and Fig. 7, Elements S704-S706, and S800*).

Balakrishnan and Grant are analogous art because they are from a similar field of endeavor in speech controlled computer applications. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to combine the teachings of Balakrishnan and Grant to provide a more efficient means of operating a speech enabled computer interface by eliminating the need to utter multiple commands to perform a desired application task through the use of a single command phrase (*Grant, Col. 2, Line 57- Col. 3, Line 3*).

With respect to **Claims 2, 9, and 16**, Balakrishnan recites:

Prior to evaluating the contexts, a step of creating the contexts for the speech enabled applications in the speech-enabled environment (*created contexts based upon a focus state of a*

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speech enabled application (foreground or background) utilized by an arbitrator to appropriately direct a speech command, Col. 4, Lines 52-57. Furthermore, in order for the arbitrator to utilize the contexts, it would be inherent that there must have been some prior step of context creation to define the context states (foreground and background)).

With respect to **Claims 3, 10, and 17**, Balakrishnan discloses:

Identifying each context based on a persistent grammar (*vocabulary that would be valid for all context states such as "quit," Col. 4, Line 62*), a foreground grammar (*vocabulary appropriate when a command would be active, such as edit, that would be directed to an application in the foreground, Col. 4, Lines 52-67*), or a background grammar (*vocabulary that would be associated with a background application such as "start" or "open," Col. 4, Lines 45-51*) for each speech enabled application.

Balakrishnan further discloses a context-dependent arbitrator capable of distinguishing between different types of commands to identify a particular focus state and determining a confidence level indicator, based upon the focus state, in order to distribute a speech command to an appropriate application.

With respect to **Claims 4, 11, and 18**, Balakrishnan discloses:

The step of evaluating contexts comprises prioritizing the contexts based on the access characteristic (*context-dependent arbitrator that gives priority to an application based upon a foreground or background focus state, Col. 4, Lines 52-58*).

With respect to **Claims 5, 12, and 19**, Balakrishnan recites:

The access characteristic is based on recency of relevant access to the context (*arbitrator that assigns a higher confidence score to an active and most current application in a foreground context state, Col. 4, Lines 52-58*).

With respect to **Claims 6, 13, and 20**, Balakrishnan discloses:

The step of directing the representation of the spoken utterance to the one of the contexts comprises using a grammar to identify and select a context of the selected speech enabled application (*application-specific vocabularies, which define acceptable commands, Col. 4, Lines 1-17, that enable a context-dependent arbitrator to identify and direct a speech command to a particular application in a foreground or background context, Col. 4, Lines 38-67*).

With respect to **Claims 7, 14, and 21**, Balakrishnan in view of Grant teaches the application specific vocabularies (grammars), which determine acceptable commands, that enable a context-dependent arbitrator to identify and direct a speech command to a particular application in a foreground or background context, as applied to Claims 6, 13, and 20.

Balakrishnan does not teach the use of a Backus Naur form grammar, however, it would have been an obvious matter of design choice to utilize a Backus Naur grammar to define acceptable speech commands for a particular application context, since the applicant has not disclosed that utilizing a Backus Naur grammar form is for any particular purpose and it appears that speech commands could be sufficiently identified as being associated with a particular application context with an alternate grammar form.

With respect to **Claim 22**, Balakrishnan discloses:

Evaluating a plurality of contexts for speech-enabled applications and prioritizing the contexts based upon a recency of access characteristic context (*arbitrator that assigns a higher*

confidence score to an active and most current application in a foreground context state, Col. 4, Lines 52-58);

Receiving a representation of a spoken utterance, the spoken utterance including a command that is able to be associated with multiple approaches (*digitizing a speech input from a microphone and extracting features, Col. 4, Lines 18-21, and “start” and “open” commands, Col. 4, Lines 38-67*); and

Directing the representation of the spoken utterance to a selected speech enabled application based upon results of the step of evaluating the contexts (*directing a speech command to a particular application based upon a confidence level relating to context, Col. 4, Lines 52-58*).

Balakrishnan does not specifically suggest that a speech command applied to a selected speech enabled application includes launching the selected speech enabled application as needed and performing a function of the command, however Grant recites such a method (*Col. 8, Lines 45-51, Col. 9, Lines 18-46, and Fig. 7, Elements S704-S706, and S800*).

Balakrishnan and Grant are analogous art because they are from a similar field of endeavor in speech controlled computer applications. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to combine the teachings of Balakrishnan and Grant to provide a more efficient means of operating a speech enabled computer interface by eliminating the need to utter multiple commands to perform a desired application task through the use of a single command phrase (*Grant, Col. 2, Line 57- Col. 3, Line 3*).

With respect to **Claim 23**, Balakrishnan further discloses:

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Directing is biased to the most recently accessed application (*arbitrator that assigns a higher confidence score to an active and most current application in a foreground context state, Col. 4, Lines 52-58*).

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

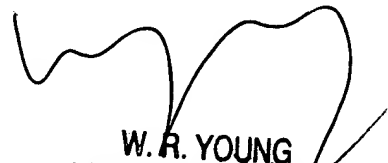
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S. Wozniak whose telephone number is (571) 272-7632. The examiner can normally be reached on M-Th, 7:30-5:00, F, 7:30-4, Off Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571) 272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James S. Wozniak
8/29/2005



W. R. YOUNG
PRIMARY EXAMINER